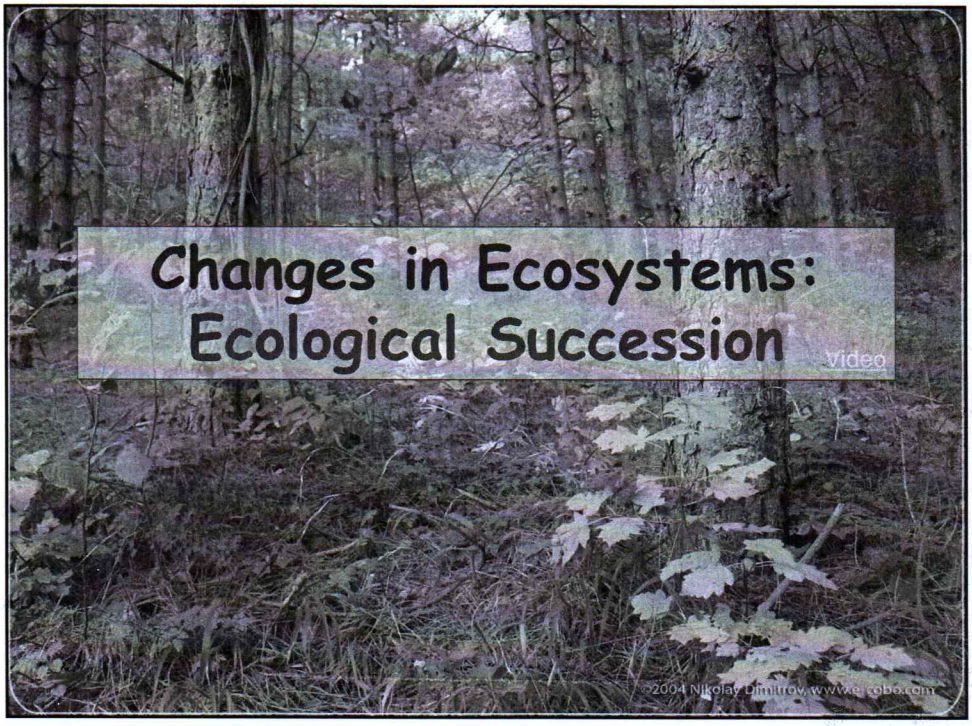


What is Ecological Succession?

- Natural, gradual changes in the types of species that live in an area
- Can be primary or secondary
- The gradual replacement of one plant community by another through natural processes over time

©2004 Nikolay Dimitrov www.e-cobo.com

Primary Succession

- Begins in a place without any soil:
  - » *Sides of volcanoes*
  - » *Landslides*
  - » *Flooding*
- First, lichens that do not need soil to survive grow on rocks
- Next, mosses grow to hold newly made soil
- Known as PIONEER SPECIES

©2004 Nikolay Dimitrov www.[illegible].com

First ones here

Pioneer Species

Lichens break down rock to form soil.

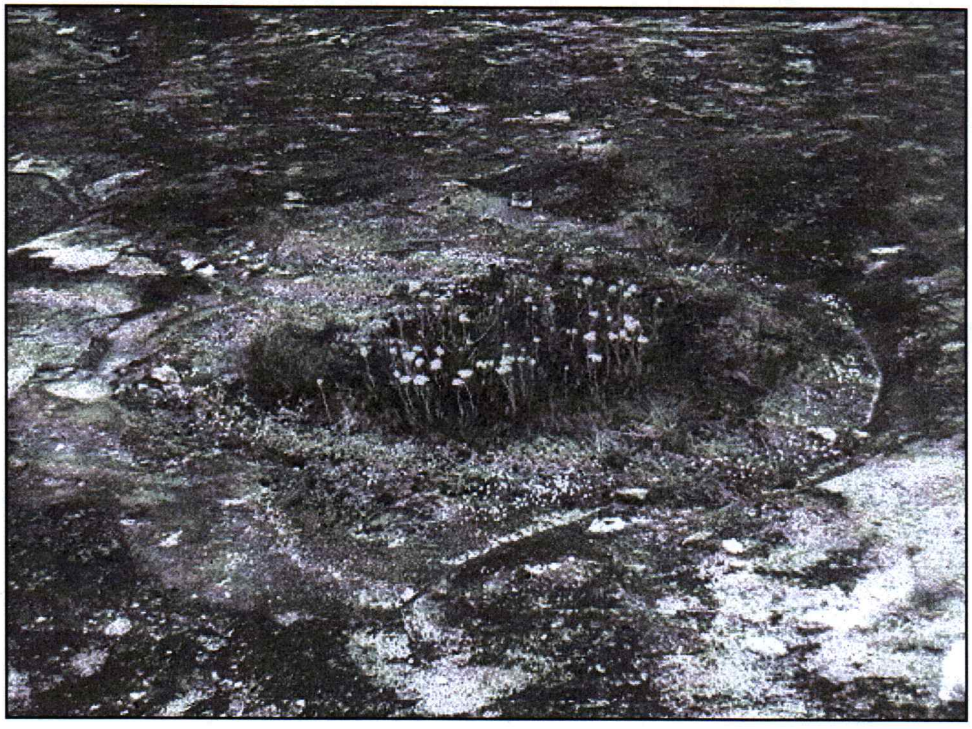
Low, growing moss plants trap moisture and prevent soil erosion

Primary Succession

- Soil starts to form as lichens and the forces of weather and erosion help break down rocks into smaller pieces
- When lichens die, they decompose, adding small amounts of organic matter to the rock to make soil

©2004 Nikolay Dimitrov www.geobor.com

Pronounced "like-ens."



Primary Succession

- Simple plants like mosses and ferns can grow in the new soil

©2004 Nikolay Dimitrov, www.e-cobo.com

Primary Succession

- The simple plants die, adding more organic material (nutrients to the soil)
- The soil layer thickens, and grasses, wildflowers, and other plants begin to take over

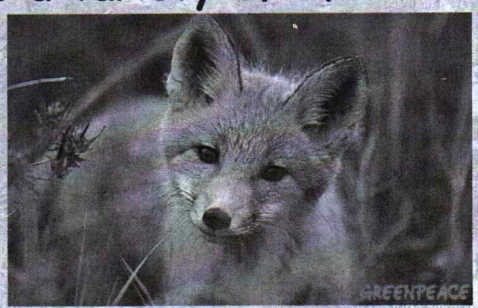
©2004 Nikolay Dimitrov, www.e-cobo.com

Primary Succession

- These plants die, and they add more nutrients to the soil
- Shrubs and trees can survive now

Primary Succession

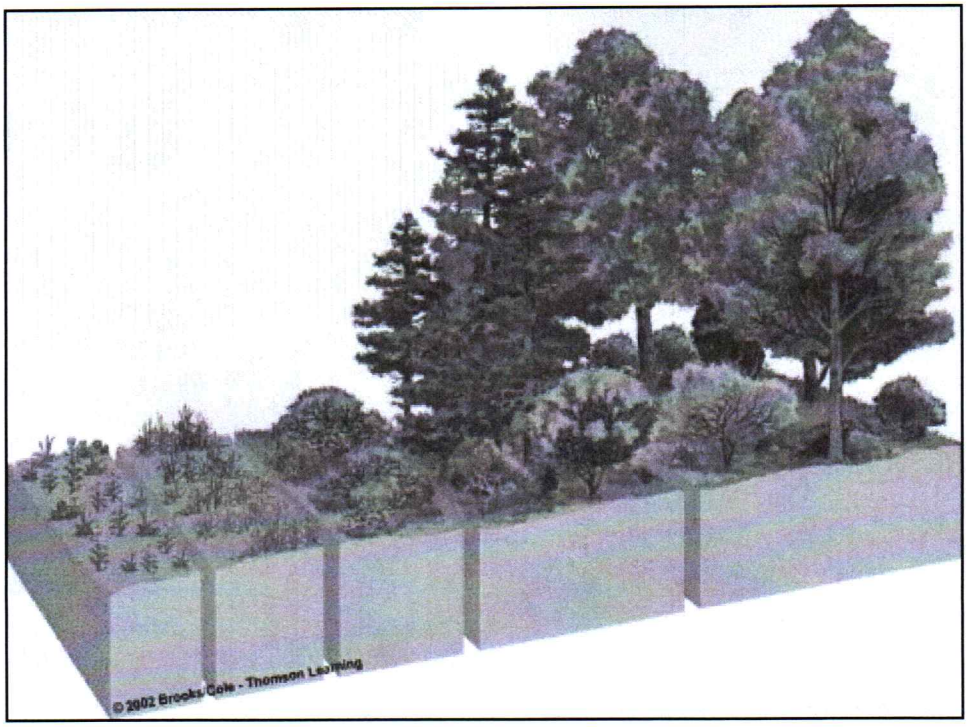
- Insects, small birds, and mammals have begun to move into the area
- What was once bare rock, now supports a variety of life



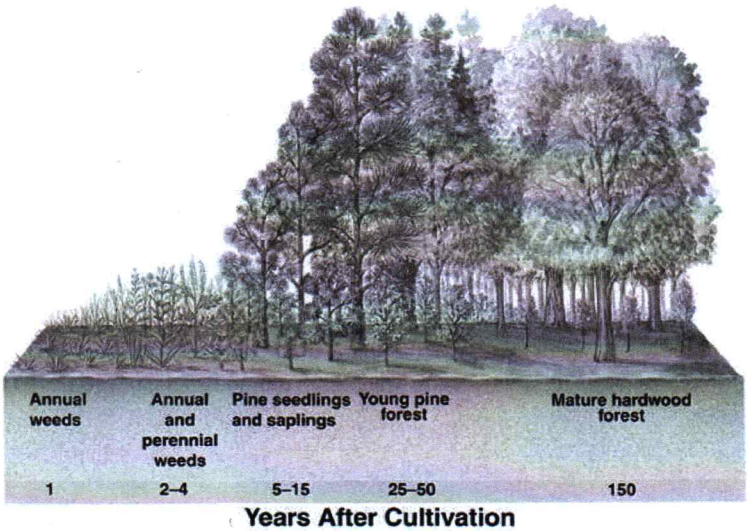
Secondary Succession

- Begins in a place that already has soil and was once the home of living organisms
- Occurs faster and has different pioneer species than primary succession
- Example: after forest fires

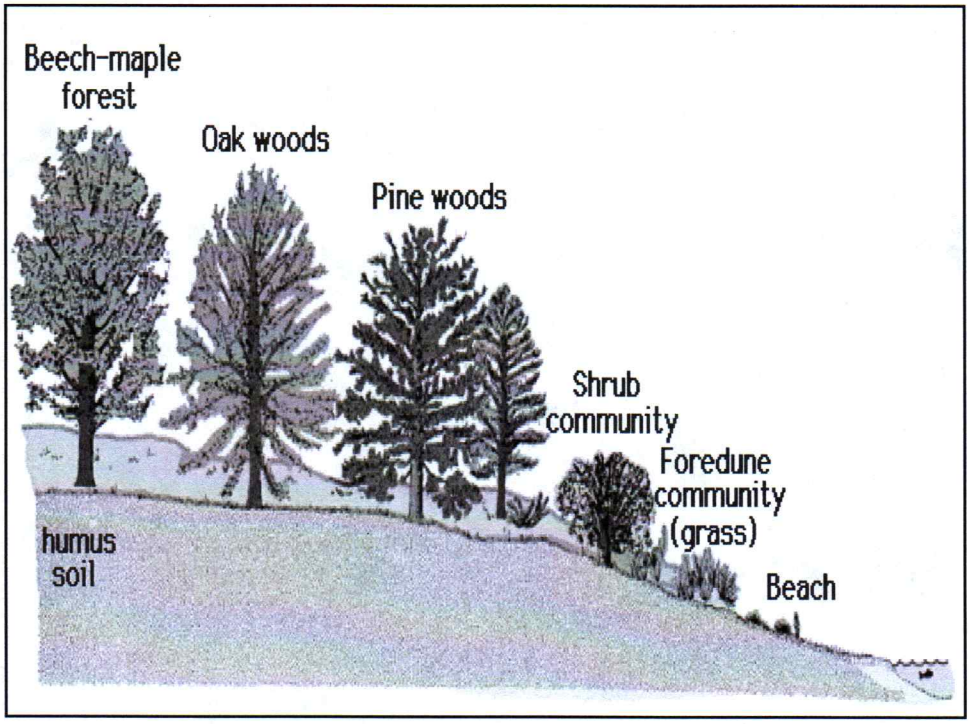
©2004 Nikolay Dimitrov, www.e-cobo.com



Raven/Berg, Environment, 3/e
Figure 5.17



Harcourt, Inc.



Climax Community

- A stable group of plants and animals that is the end result of the succession process
- Does not always mean big trees
  - Grasses in prairies
  - Cacti in deserts

©2004 Nikolay Dimitrov www.e-cobo.com